PARTICIPANT AND MENTOR PERCEPTIONS OF A PHYSICAL ACTIVITY PROGRAM FOR INDIVIDUALS WITH DEPRESSION

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Amanda D. Clifford
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PARTICIPANT AND MENTOR PERCEPTIONS OF A PHYSICAL
ACTIVITY PROGRAM FOR INDIVIDUALS WITH
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ABSTRACT

PARTICIPANT AND MENTOR PERCEPTIONS OF A PHYSICAL ACTIVITY PROGRAM FOR INDIVIDUALS WITH DEPRESSION

by

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Master of Arts in Kinesiology

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Objective: The purpose of this study was to identify participant and mentor perceptions of the dynamics and personal competencies demonstrated in a college physical activity program for individuals suffering from depression. Participants: Participants included ten 18- to 40-year-old students diagnosed with depression at a public state university in the western United States and five 22- to 27-year-old student mentors. Methods: Data sources included peer mentor reports logged twice a week, participant journals, and participants and mentors interviews. Data were analyzed using constant comparison, codes were generated and categorized themes were created and reduced to clusters. Results: Dynamics of the peer mentoring relationship as described by both mentors and mentees included: personal and professional interactions, communication and openness, and role-modeling. Skills and/or competencies needed to
enhance peer mentoring relationship success included professionalism and knowledge, dependability and trustworthiness, enthusiasm, and empathy. **Discussion:** The findings show the varying components of a successful peer mentoring relationship and illustrate the relationship and interactions between mentor and participants. Results indicated positive mentoring relationships included personal and professional interactions and participants repeatedly stated that their adherence to the program and attendance to physical activity sessions occurred out of a sense of mutual responsibility to their peer mentors. Findings reinforce the importance of peer interaction and mentor preparation, providing suggestions for additional mentor training and more formal debriefing protocols.
CHAPTER I

INTRODUCTION OF THE STUDY

Depression is a prevalent and growing issue on university campuses (Lindsey, Fabiano, & Stark, 2009; Mahmoud, Staten, Hall, & Lennie, 2012). The university environment provides a unique culture and set of adjustments - such as independent living, new social environments, more difficult classes - which many college students struggle to make and become a part of. According to the American College Health Association [ACHA] (2012), who currently amasses the most accurate information on college student well-being, over 30% of college students reported feeling “so depressed that it was difficult to function” (p. 14). This depression results in social isolation, decrease in academic performance, low self-esteem, and in some serious cases suicide (ACHA, 2012). Fortunately, many university campuses have resources for students to obtain help for depression symptoms.

Some of the most common treatment options include psychotherapy and antidepressant medication, both of which tend to create a negative social stigma and are a more costly options, especially for those without health insurance (Burnett-Zeigler, Zivin, Islam, & Ilgen, 2011; Jones, Cook, & Wang, 2011). Another option is the use of physical activity as treatment for depression. Not only does physical activity have a positive social stigma, but it is also accessible for most college students. This alternative has been studied since the early 1900s (Franz & Hamilton, 1905; Vaux, 1926). Physical activity
interventions for depression have been presented in a variety of forms involving both aerobic and resistance training with research designs consisting of both supervised and self-reported physical activities. Peer-mentoring and social support are often a main component to programs as well. Social support has also been found to be a significant predictor of physical activity participation in college students, which is why research shows that peer-support has been a popular form of health promotion on many college campuses (Boyle, Mattern, Lassiter, & Ritzler, 2011; Leslie et al., 1999; Wallace, Buckworth, Kirby, & Sherman, 2000). Some of the main contributions to the antidepressant effects of physical activity are an increase in self-efficacy in regards to one’s health, increases in the individuals actual physical health, and a higher retention rate of continuing the exercises with lower relapse (Blumenthal et al., 1999; Bodin & Martinsen, 2004; Ryan, 2008). Physical activity has been found to show significant results in decreasing depression symptoms equal to the results of other forms of treatment (Blumenthal et al., 1999; Rethorst, Wipfli, & Landers, 2009).

One component to treatment programs is the use of physical activity as a treatment of depression. Conjunctively, the social support within the programs plays a role in adherence and enjoyment. Peer-mentoring is a noteworthy part of many exercise treatment programs and a primary focus of this study. The role of the peer mentors is to provide both physical and social support to the participants during their hour-long sessions each week. Mentoring has been found to be an extremely important part of the university experience and the enhanced support networks help students achieve higher levels of success, increased self-esteem, and better relationship building skills (Eby & McManus, 2004; King, Vidourek, Davis, & McClellan, 2002). The aim of this study is to
examine this relationship and how it impacts the effectiveness of a physical activity program for individuals with depression within a university setting.

**Statement of Purpose**

The purpose of this study was to identify participant and mentor perceptions of the dynamics and personal competencies demonstrated in a college physical activity program for individuals suffering from depression. For the purpose of this study, relationship dynamics are defined as the active and changing process in which two or more people or groups talk to, behave toward, and deal with each other.

Specific research questions addressed included:

1. What are the dynamics of the peer mentoring relationships in this program?
2. What inter-personal skills, as perceived by the mentor and mentee’s experiences, make a peer mentoring relationship successful?

**Limitations**

1. Sample size was limited to the participants who enroll in the WellcatFit program during the Spring 2012 semester.
2. No formal information was provided about additional participant characteristics (prescription drugs, talk therapy, etc.).
3. Participant school and work schedule.
4. Number of participants limited by practitioner referrals.
5. Use of prescription drugs and/or counseling.
Delimitations

1. Two of physical activity sessions per week.
2. Mentor assignments made based on gender preference and scheduling.
3. Referrals to the program came through the Student Health Center and Counseling and Wellness Center.
4. Age range of participants was between 18 to 55.
5. Participants were non-pregnant and had no contraindication to being physically active.

Significance

This research may increase the effectiveness of peer-mentored physical activity programs assisting in the treatment of depression on university campuses. The study has the possibility of increasing knowledge about this program potentially facilitating expansion to other universities or alternative environments. Results may inform program quality- for example, how mentors are trained and how mentor pairs are decided. It may also include information on the overall experiences of those involved and any noted changes in mood or symptoms. This study may provide information to better the program (Wellcat Fit), and lend to other universities interested in a similar programs.

As a unique pilot study, there are preliminary indications that the program can positively affect depression in college students and that the mentoring relationship is an integral part of the program, data was collected solely through qualitative means (Rieck, 2012). The qualitative findings may add integral information as to the contributing factors of program directly from the participants and mentors descriptions. Questions
remain as to the mentor and participant perception of these roles (including what makes
the successful, perceived barriers, and any changes during participation in program).

Definition of Terms

**Depression**

Depression comes in many forms but is typically characterized with a lack of
interest in daily activities, feelings of worthlessness, lack of energy, sleep dysfunction,
and a variety of other symptoms (Gerrig & Zimbardo, 2002).

**Peer Mentor**

A peer leader who acts as a connecting link for other students both in and out
of the classroom, student advocate, and trusted friend (Colvin & Ashman, 2010).

**Perceptions**

The processes that organize information in the sensory image and interpret it
as having been produced by properties of objects or events in the external (Gerrig &
Zimbardo, 2002).

**Physical Activity**

Any bodily movement produced by skeletal muscles that requires energy
expenditure.

**Qualitative Research**

A constructivist method of research dependent on a broad collection of
narrative descriptions that enable a researcher to study a particular phenomenon or
perceptions of those involved in the study (Locke, Silverman, & Spirduso, 2000; Myers,
1997).
Self-efficacy

A person’s estimate of his or her capacity to orchestrate performance on a specific task (Gist & Mitchell, 1992).

Social Support

Social support resources, including material aid, socioemotional support, and informational aid, provided by others to help a person cope with stress (Gerrig & Zimbardo, 2002)
CHAPTER II

REVIEW OF LITERATURE

Depression is a significant public health issue and has been ranked by the World Health Organization (WHO) as one of the most burdensome diseases (WHO, 2002). Depression is also medically termed Major Depressive Disorder (MDD) and generates the greatest decrease in health when compared with the other major chronic diseases of angina, arthritis, asthma, and diabetes (Moussavi et al., 2007). It comes in many forms but is typically characterized with a lack of interest in daily activities, feelings of worthlessness, lack of energy, sleep dysfunction, and a variety of other symptoms (American Psychological Association [APA], 1994). It not only decreases quality of life and daily functioning (Alonso et al., 2004), but more often than not is associated with comorbidity, which is the presence of one or more disorders in addition to the primary disorder (Kessler et al., 2009).

One of the most frequently used instruments in diagnosing depression is the Beck Depression Inventory (BDI). This is a self-reported inventory to assess the severity of depression in individuals and uses symptoms such as hopelessness, irritability, fatigue, and various others as determinants (Beck, Steer, & Carbin, 1988). Individuals diagnosed with depression experience spillover of the disease into most aspects of their life and it is not uncommon to have comorbidity. Some common comorbidities linked to depression are anxiety, substance abuse, diabetes, and chronic pain. Every additional symptom
causes the longevity of individuals to decrease (Kessler et al., 2009). Depression is an international burden, as well as a personal burden for those individuals suffering from the disorder. Addressing depression and depression comorbidity is likely to improve the overall health of populations.

Depression is a major disorder on most university campuses. According to The National College Health Assessment Survey (NCHA), 10.3% of college students reported being diagnosed with depression while in college (ACHA, 2012). The U.S. Surgeon General’s Report on Mental Health indicates that major depressive disorders (MDD) account for 20-35% of all deaths by suicide. Also, over half of patients being seen by primary care doctors suffer from a mental illness, primarily depression (U.S. Department of Health and Human Services [USDHHS], 1999). In the majority of research done on depression, the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) is used to define the criteria for major depressive disorder (APA, 1994). Educating and treating university depression may decrease the depression rates of our later population.

This literature review presents information on the links between physical activity and exercise. It continues on to discuss the prevalence and environment of depression on university campuses and existing interventions. It will conclude by examining and discussing the role of social support and peer-mentors as components of a physical activity treatment program.
Treating Depression with Physical Activity

Many individuals suffering from depression symptoms never seek treatment, partly because of the social stigma associated with the disorder (Jones et al., 2011; Priest, Vize, Roberts, Roberts, & Tylee, 1996; Schomerus, Matschinger, & Angermeyer, 2009). Physical Activity poses as a treatment option that is available to anyone and does not hold a negative social stigma. The connection between physical activity and depression has been studied since the early 1900s when Franz and Hamilton examined different variables and response times of two individuals diagnosed with depression (Franz & Hamilton, 1905). It was not until 1926, that physical activity was used to assist the more traditional treatments for depression, believing that it would cause nervous stimulation and result in a happier mood (Vaux, 1926).

With the volume of research done on the link between physical activity and depression, there is strong confirmation of a connection between the two- and the topic is readily gaining momentum. It has been studied in different capacities and with different methods, results always show a negative correlation between physical activity and depression. It has been found that aerobic exercise has more significant results than does stretching or resistance training on decreasing depression symptoms (Penninx et al., 2002). One study examined the correlation between serum levels of inflammatory mediators and depression. It found through the use of aerobic physical activity, that there were significant reductions in serum inflammatory mediators which was correlated to a decrease in depression (Kohut et al., 2006). Exercise has been successfully used to assist in decreasing depression symptoms in individuals with post traumatic brain injury; it has been shown to reinvigorate brain pathways, improving mood, and quality of life for those
individuals (Wise, Hoffman, Powell, Bombardier, & Bell, 2012). Studies have also shown that continued participation in physical activity can aid in continuing reduction of depression symptoms after initial treatment (Mata, Hogan, Joormann, Waugh, & Gotlib, 2012).

A 1999 study done at Duke University Medical Center, called SMILE (Standard Medical Intervention and Long-Term Exercise) is one of the most commonly noted studies in this area of study (Blumenthal et al., 1999). There was sample size of 157 sedentary men and women, diagnosed with MDD, who were randomized into treatments groups of exercise, medication, or a combination of both for four months. Depression symptoms were measured using the Beck Depression Inventory and Hamilton Rating Scale for Depression. After the study, all three groups showed statistically significant improvements (Blumenthal et al., 1999). A six-month follow-up of SMILE showed that the individuals in the exercise treatment group had lower rates of relapse which was attributed to a continuation of exercise on their own after treatment (Babyak et al., 2000). Another follow-up was done one year after the 4-month clinical trial and again found that the level of remission for individuals in the original exercise treatment group remained higher than the other groups (Hoffman et al., 2010).

More recently, there have been studies done to identify more specific aspects of physical activity that attribute to the decrease in depression symptoms. One study was done to determine the dose response from exercise and found that the mean public health dose, according to the American College of Sports Medicine, of aerobic exercise is effective in treating depression (Dunn, Trivedi, Kampert, Clark, & Chambliss, 2005). Another study was done on the specific effects of self-efficacy as a mechanism for the
antidepressant effect. Twelve participants were randomized into two groups and given either a high self-efficacy task of riding a stationary bike or a low self-efficacy task of martial arts. The study found that the greatest mood change was seen during martial arts where specific self-efficacy was initially the lowest and increased as the exercise was performed (Bodin & Martisen, 2004). The research repeatedly shows a negative association between physical activity and depression symptoms.

Though there are many, there are some commonly found characteristics that make these particular programs effective. One important part is the direct supervision of the activities and participants in each program. Components to this may include motivational coaching, supervision of exercise, and/or follow up (Blumenthal et al., 1999; Carter, Callaghan, Khalil, & Morres, 2012). The actual programming of activities is typically an important part; this includes age specificity of activities, any necessary teaching of the activities to the participants, and the specifics of the physical activity towards intended results (Carter et al., 2012; Dunn et al., 2005; Lanuez, Jacob-Filho, Lanuez, & Oliveira, 2011). A final common component is mentoring; this provides the supported transition from sedentary life into the participation of physical activity. This mentoring interaction may also lend to the social aspect of the programs generating a larger support base for each participant (Dorgo, Robinson, & Bader, 2009).

Depression Within College Campuses

College campuses provide a distinctive culture and environment where students are discovering and engaging in a wide range of first time experiences. Unfortunately, for many students depression becomes one of their experiences. Rates of
depression within universities has been on the rise, which is alarming given that depression in adulthood often has its first episode during or just before college age (Hunt & Eisenberg, 2010; Kessler et al., 2005). In 2012, the American College Health Association – National College Heath Assessment (ACHA-NCHA) found that over 30% of college students reported feeling, “so depressed that it was difficult to function” (ACHA, 2012). Depression affects not only the mental well being of students, but it has detrimental effects on their physical well being as well. Students seek care at university health centers for a variety of ailments, and a study found that university students with depression are worse off when treating everyday health concerns compared to students without depression (Suominen et al., 2011). This may be attributed to poor motivation to seek treatment or the overall decrease of physical and mental functioning as a result of depression. With college comes a newfound independence and step towards personal discovery; this can come with excitement and opportunity for some while others find distress, self-esteem issues, and loneliness. Although each experience is customized by the differing institutions as well as the individual student, this data highlights the importance in understanding depression as it relates to problems for university students.

Although there is no exact framework for what leads a college student to becoming depressed, researchers have found common contributors. Identity development, relationships and sexuality, and interpersonal issues are three overarching contributors to depression (Kadison & DiGeronimo, 2004), which often times stem to substance abuse (Gonzalez, Reynolds, & Skewes, 2011) and self-esteem issues (Eisenbarth, 2012). These issues lead to an ever growing and broad range of psychological needs of college students, some major topics being multicultural and gender issues, career and
developmental needs, life transitions, stress, and violence (Kitzrow, 2003). Another more recent, contributing factor on university campuses is the socially isolating result of an increased use of information and communication technology (ICT). One study examined whether high quantity of ICT use is a risk factor for developing psychological symptoms such as stress, depression, and sleep disturbances among young people (Thomee, Eklof, Gustafsson, Nillson, & Hagberg, 2007). The study found that ICT might have a negative impact on psychological health (Thomee, Eklof, et al., 2007). A qualitative study was done among university students to examine the association between the high use of ICT and reported mental symptoms of depression, sleep disorders, and stress among students. Students who reported a high use of computers or mobile phones discussed issues such as mental overload, neglect of personal time, role conflict, social isolation, and worry; consequently, the overuse of ICT increases the likelihood of depression (Thomee, Dellve, et al., 2010).

Detection and prevention are two developing areas of interest for universities. Untreated depression can lead to decrease in GPA scores, acute illness, increased alcohol consumption and smoking levels, increase in anxiety levels, increase in self-injurious behavior, university dropout, suicidal ideation, and suicide (Buchanan, 2012). Depression can lead to impairments in one’s perceived ability to perform daily functions. On a survey given to college students by the National Survey on Drug Use and Health, 48.6% of full-time college students reported a severe level of impairment due to symptoms of depression (Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, 2012). One of the major issues on campuses is the academic spillover. According to the 2012 National College Health Assessment,
12.8% of students reported depression as a factor affecting their individual academic performance and taking note that another 21.0% reported anxiety as a factor which is one of the most common comorbidity factors linked to depression (ACHA, 2012). In contrast, academic pressure may be one of the contributing factors attributing to an individual’s stress levels and potentially depression. This is usually present in individuals who hold themselves to the “perfect student” standard and these students are frequently the least willing to admit that they are struggling or overwhelmed (Kadison & DiGeronimo, 2004).

University Interventions

Two major issues to be addressed when discussing depression treatment resources on a university campus are availability and adequacy (Miller & Chung 2009; Wang et al., 2005). Depression appears to be a growing issue on university campuses but university counseling services remain to have minimally adequate treatment (Eisenerg & Chung, 2012). A review of a five-month examination of university counseling programs was done by the Investigative Journalism Education Consortium (IJEC) and found that centers frequently fell short of the number of mental health providers recommended by the International Association of Counseling Service (IACS 2010; IJEC 2012). Although the counseling resources are limited, fortunately they are often a service offered to students during the semester that has already been paid for in their student fees. This helps to prompt many students to seek the care. One of the more prevalent issues is the awareness of depression among college students and the possible detection and/or prevention of increasing depression symptoms.
According to the findings of the ACHA-NCHA only 10.6% of students are diagnosed with depression compared to the 30% who reported serious depression symptoms (ACHA, 2012). In a study conducted by Klein, Ciotoli, and Chung (2011), 3,713 university students were given a standardized screening approach and primary care professionals identified students with depressive symptoms. It was concluded that systematic depression screenings in college health centers are a beneficial way to detect untreated depression (Klein et al., 2011). Another approach is the prevention of depression on campuses and a variety of different approaches have been tried among universities. Some of these methods include cognitive-behavioral therapy (Hogg & Deffenbacher, 1988; Seligman, Schulman, & Tyron, 2007), interpersonal-process, computer training (Cukrowicz & Joiner, 2007), personal feedback through mailed intervention suggestions (Geisner, Neighbors, & Larimer, 2006), and exercise training (Nelson, Story, Larson, Neumark-Sztainer, & Lytle, 2012; Roth & Holmes, 1987).

One of the main issues is the lack of standardized intervention and outcomes of the various university depression prevention or treatment programs. One literature review encouraged researchers and psychiatric practitioners to collaborate and promote a universal evidence-based treatment and prevention program to be easily implemented in diverse university settings (Buchanan, 2012).

Social Support

The American Psychological Association has defined social support as, “Resources, including material aid, socioemotional support, and informational aid, provided by others to help a person cope with stress” (Gerrig & Zimbardo, 2002). Social
support plays a significant role in the lives of college students: how comfortable they feel, how they handle situations, and what activities they participate in. A survey was given to show the common stressors of home management, ability to work, close relationships, and social life to show where students felt the most impairment with responses varying from no interference to very severe interference (Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, 2012). The most commonly expressed severe impairments from full-time college students are seen in their ability to maintain close relationships and a social life (Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, 2012). One of our species major identifying factors is interpersonal connections. When coming to college it is important to establish those connections quickly, and if not individuals become more vulnerable and susceptible to depressive symptoms (Kadison & DiGeronimo, 2004). Many schools have incorporated peer or faculty mentoring programs to try to assist in this transition and to accommodate positive social support structures.

Role of Peer Mentors

The majority of the research on peer mentoring is done within the context of an organizational or business setting, very little has been done within a university education setting (Ryan, Whittaker, & Pinchney, 2002). The information in this portion of the literature review is based on a collection of articles from a variety of settings including: business environment, K-12 grade school, psychological peer mentoring, physical activity peer mentoring, and university programs. Peer mentoring at the
university level began as a way to increase retention rates but has now branched into more specific need-based programs (Power, Miles, Peruzzi, & Voerman, 2011). Peer-mentoring is a way to provide additional support as individuals make the transition into a new setting and be there as an added support system the entire way through. It can decrease stress, increase self-efficacy and self-esteem, improve academic achievement, and assist in socialization and relationship building (King et al., 2002; Power et al., 2011).

The mentors involved in these programs also reported benefitting from the mentor/mentee relationship. Some of the benefits were enhanced support networks and a sense of fulfillment from helping another achieve higher success (Eby & McManus, 2004). Another important outcome found for mentors were enhanced interpersonal and communication skills (McLean, 2004). Both mentors and mentees reported an improvement in qualities such as patience, compassion, maturation, sense of responsibility, and time management (McLean, 2004). One study specified the importance in facilitating the growth of the mentee/mentor relationship in order to produce the best social, emotional, and academic development in the students (Ryan et al., 2002).

Dorgo et al. (2009) studied a group of adults to compare changes in perceived physical, mental, and social function on a group of adults who were lead in physical activity by peers in comparison with a group trained by kinesiology student mentors. This study concluded that the adults who participated in the program with peer support perceived significantly higher overall improvement in all three categories (physical,
mental, and social), but the student mentor group did not (Dorgo et al., 2009). This lends to the growing trend in peer mentoring as a more effective method of support.

Summary

Depression is a major health concern in today’s world. The effects of exercise on depression is an emerging research topic. Many of the studies have found physical activity to be a significant means of treating depression with or without other treatments, such as prescription drugs or counseling. Depression is continually increasing on university campuses, while many cases still going unreported. Student depression can cause a decrease in academic performance, social isolation, low self-efficacy, and in more serious cases drop out or suicide. University campuses have begun to create support programs as well as treatment and counseling centers to help those suffering from depression- but there is still a lack of helpful resources. Early detection and prevention in the early college years may help to decrease the overall effect of depression in universities. This can be done through survey work or mentoring programs. Peer-mentoring programs appear to be effective and beneficial to not only the mentee but also for the mentors in increasing socialization, self-efficacy, academic success, and low feeling of stress or anxiety. Although general peer-mentoring programs have shown to be effective, peer-mentoring exercise programs have not been extensively studied.
CHAPTER III

METHODOLOGY

Purpose

The purpose of this study was to identify participant and mentor perceptions of the dynamics and personal competencies demonstrated in a college physical activity program for individuals suffering from depression. For the purpose of this study, relationship dynamics were defined as the active and changing process in which two or more people or groups talk to, behave toward, and deal with each other. The following chapter is divided into six sections: introduction to the Wellcat Fit Program, participant selection, peer mentor selection and training, data, data analysis, and trustworthiness.

Wellcat Fit

Wellcat Fit is a peer mentored physical activity program designed to be a treatment component of depression in college students. At the time of this study, the program was in its fourth semester at California State University- Chico and had served approximately twelve participants per semester in previous years. It was designed as a program for students, run by students, utilizing physical activity, intrinsic motivation and peer mentoring as a treatment for depression. The frequency of the program was an average of two hours of participation on two separate days, per week for eight weeks. The forms of physical activity engaged in during these sessions were chosen by the participants and facilitated by the mentors.
Once hired, peer mentors participated in training including three hours of instruction by the program director that serves as a physician at the university’s Counseling and Wellness Center. Training addresses the benefits and risks of exercising, confidentiality, motivational techniques, depression education, adherence strategies, emergency contacts, and symptoms and signs of suicidal ideation. One of the specific training programs used was DORA (Depression OutReach Alliance), presented to the mentors by staff from the Counseling Center. Mentors also met with the program director to review program logistics and discuss the peer mentoring topics including: communication, relationship development and boundaries, and confidentiality. Peer mentors only contacted student participants after completing all of the training and having been matched up by the program director.

The primary roles of the peer mentors were to: provide information, motivate regular physical activity, and serve as a role model for participants. First, mentors provided relevant information to participants regarding the importance of regular physical activity (both in terms of health and psychological state) and the objectives of the program. As a result of training, mentors were knowledgeable of techniques and safety associated with participation in various forms of physical activity. In addition, they were responsible for building a professional and motivating relationship between themselves and participants during physical activity sessions.

Participant Selection

Participants met with a counselor or physician who discussed with them the various treatment options, including Wellcat Fit. If, when the program was proposed to
the students, they chose to participate they then consented to their information being given to the program director. To be included in the study, participants must have been non-pregnant and have had no contraindication to being physically active. Participating students continued to receive routine medical care and prescription drugs during this study.

Peer Mentor Selection and Training

The program consisted of five peer mentors and ten participants. Peer mentors were Kinesiology graduate and undergraduate students who had or were in the process of taking the course KINE 505: Exercise Behavior & Adherence and be recommended by a faculty member. All had completed an application including a resume, unofficial transcripts, a cover letter, and at least two references. Application were reviewed by the program director and interviews for qualified applicants followed. Once hired, the peer mentors underwent training- which included three hours of training at the university’s Counseling and Wellness Center and training conducted by the program director (see Appendix C). Training included the benefits and risks of exercising, confidentiality, motivational techniques, depression education, adherence strategies, emergency contacts, and symptoms and signs of suicidal ideation. One of the specific training programs that was used was DORA (Depression OutReach Alliance), presented to the mentors by staff from the Counseling Center. Mentors also met with the program director to go over program logistics and discuss peer-mentoring topics such as: communication, relationship development, and confidentiality. Peer mentors only contacted student participants after completing all of the training to set up sessions.
Data

Data sources included: mentor reports, participant journals, peer mentor interviews and participant interviews.

**Mentor Report**

Mentor Reports were filled out after each meeting with their mentor. An online calendar (using Outlook) was created for mentors to keep track of participant meetings and details of each meeting. The prompt provided to the mentors was, “Please provide details of activities participated in and any other significant points of information (i.e., mood change, significant points of conversation, etc.” This was asked to gain immediate insight of mentor observations of sessions in hopes to cross-reference this with participant journal submissions for triangulation.

**Participant Journals**

Participants were also encouraged to make an electronic journal submission after each session with their mentor. The prompt for these journal submissions read: “What was your experience in the program this week?” After the program was completed both participant and mentors were interviewed separately.

**Participant Interviews**

Semi-structured, open-ended interviews were conducted with all willing Wellcat Fit participants. Questions focused on challenges and barriers, if any, and how these perceived barriers were addressed. Questions were also asked cueing discussion about the relationship between participants and their mentor, discussion topics, activities engaged in and how they were chosen. (See appendix A for detailed interview protocol).
Mentor Interviews

The peer mentor interviews discussed challenges and barriers the mentors faced in their relationship with mentees during the program. Perceived barriers were discussed, as well as any skills and/or competencies that were necessary to make a peer mentoring relationship successful. Questions were asked about the relationship between themselves and their participant, discussion topics, activities engaged in and how they were chosen. Mentors were also asked what, if any, observed changes were seen for their participant. (See Appendix B for detailed interview protocol).

Data Analysis

Participant and mentor interviews were audio taped and transcribed verbatim. Constant comparison (Goetz & LeCompte, 1984; Corbin & Strauss, 2008) was used to analyze interview transcripts. This systematic process included several steps utilized to categorize interview responses and accurately determine the contributing factors to and perceptions of the peer mentors and participants in Wellcat Fit. At each phase of data analysis, the researcher and an experienced qualitative researcher serving as a peer debriefer individually read transcripts and made notations in the margins. The goal of this phase was to scan the data to locate common categories of responses that related to the study’s purpose. Next, the process of conceptualizing, defining, and developing categories of results in terms of their properties and dimensions was conducted. In this phase, we brought our individual analyses together and revisited all the data to examine the mentor relationships. We took turns sharing our insights and challenged each other’s interpretations, and made new interpretations where necessary. In the final analysis
phase, the goal was to systematically develop and relate categories. This step included the
process of sorting out the relationships between concepts and sub-concepts with the
ultimate goal being to discover the ways categories related to each other. The most
relevant excerpts from each of the categories obtained by coding were integrated to
portray participant and mentor perceptions of the mentoring process. Thus, direct quotes
were drawn from participants’ interviews.

Trustworthiness

Trustworthiness was established utilizing two separate techniques. First,
triangulation employing multiple investigators and multiple data sources were utilized to
confirm the findings (Merriam, 2009). Data was triangulated for analytical purposes
across all data sources (interviews, mentor reports, participant journals). Investigator
triangulation occurred through the use of multiple investigators analyzing data. Next, a
researcher journal was kept to purposefully search for variations in participant
perceptions of the mentoring process (Merriam, 2009).
CHAPTER IV

ABSTRACT

Objective: The purpose of this study was to identify participant and mentor perceptions of the dynamics and personal competencies demonstrated in a college physical activity program for individuals suffering from depression. Participants: Participants included ten 18- to 40-year-old students diagnosed with depression at a public state university in the western United States and five 22- to 27-year-old student mentors. Methods: Data sources included peer mentor reports logged twice a week, participant journals, and participants and mentors interviews. Data were analyzed using constant comparison, codes were generated and categorized themes were created and reduced to clusters (Goetz & LeCompte, 1984). Results: Dynamics of the peer mentoring relationship as described by both mentors and mentees included: personal and professional interactions, communication and openness, and role-modeling. Skills and/or competencies needed to enhance peer mentoring relationship success included professionalism and knowledge, dependability and trustworthiness, enthusiasm, and empathy. Discussion: The findings show the varying components of a successful peer mentoring relationship and illustrate the relationship and interactions between mentor and participants. Results indicated positive mentoring relationships included personal and professional interactions and participants repeatedly stated that their adherence to the program and attendance to physical activity sessions occurred out of a sense of mutual responsibility to their peer
mentors. Findings reinforce the importance of peer interaction and mentor preparation, providing suggestions for additional mentor training and more formal debriefing protocols.

**Keywords:** depression, physical activity, peer-mentoring

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**Participant and Mentor Perceptions of a Physical Activity Program for Individuals with Depression**

**Amanda D. Clifford, Kevin Patton, Craig Buschner**

It is well documented that depression is a prevalent and growing issue on university campuses (Lindsey, Fabiano, & Stark, 2009; Mahmoud, Staten, Hall, & Lennie, 2012). According the American College Health Association, who currently amasses the most accurate information on college student well-being, over 30% of college students reported feeling “so depressed that it was difficult to function” (American College Health Association, 2012). Depression results in social isolation, decrease in academic performance, low self-esteem and in some serious cases suicide (ACHA, 2012). The university environment provides a unique culture and set of adjustments- such as independent living, new social environments, and academically challenging classes- which many college students struggle to make and become a part of.

The most common depression treatment options include psychotherapy and antidepressant medication, both of which tend to create a negative social stigma and are a more costly option, especially for those without health insurance (Burnett-Zeigler, Zivin, Islam, & Ilgen, 2012; Jones, Cook, & Wang, 2011). Another option is the use of physical activity as treatment for depression. This alternative has been studied since the early
1900s and has been found to show significant results in decreasing depression symptoms equal to the results of other forms of treatment (Rethorst, Wipfli, & Landers, 2009). A notable study conducted by Blumenthal et al. (1999) called SMILE (Standard Medical Intervention and Long-term Exercise), examined medication versus physical activity as treatments for depression – both initially lowered symptoms successfully but at a six month follow-up the exercise treatment group had significantly lower rates of relapse due to continuation of exercise. A one-year follow-up of the same participants demonstrated levels of remission for individuals in the exercise treatment group remained higher than the other groups (Hoffman et al., 2010). A more recent study indicated that 30 – 60 minutes of aerobic exercise 4 days per week reinvigorates brain pathways, improving mood and quality of life for individuals suffering from depression (Wise, Hoffman, Powell, Bombardier & Bell, 2012).

Peer-mentoring and social support are often main components of depression treatment programs. Peer-mentoring at the university level has shown to increase retention rates and is a way to provide additional support in decreasing stress, increasing self-efficacy and assisting in socialization and relationship building (King, Vidourek, Davis, & McClellan, 2002; Power, Miles, Peruzzi, & Voerman, 2011). Mentors and mentees in peer-mentoring programs have reported an improvement in qualities such as patience, compassion, maturation, and sense of responsibility (McLean, 2004). This form of social support and these relationships become an essential part of the psychosocial transformation of the program participants. Successful relationships are based on the characteristics of knowledge, trustworthiness, communication skills, empathy, enthusiasm, and mentor role-modeling (Bouquillon, Sosik, & Lee, 2005; Dorgo,
Robinson, & Bader, 2009; Kram & Isabella, 1985; Lahey, Hankin, Fraley, & Waldman, 2005; McLean 2004; Pitney & Ehlers, 2004). The combination of these characteristics provides the foundation and function for a positive helping relationship between peer-mentors and participants.

Dorgo et al., (2009) conducted a study to more clearly understand the positive impact of physical activity, paired with peer-mentoring, on depression symptoms. A group of adults were studied to compare changes in perceived physical, mental and social function – they were separated into non-peer and peer-lead physical activity programs; participants in the peer-lead group perceived higher overall improvements across the three categories. This study identified the importance of having knowledgeable peer mentors, and a non-peer expert was better than a peer novice due to confidence of instruction (Dorgo et al., 2009). The combination of knowledge of exercise programming and exercise adherence for older adults paired with peer-mentoring yielded the most positive results. Similarly, a variety of studies have examined general peer mentoring on college campuses in relation to integration, retention, and academic achievement, but very little exists in conjunction with a physical activity program, especially with a student population diagnosed with depression (King et al., 2002; Power et al., 2011; Rieck, 2012).

Research examining the interplay between peer-mentoring and physical activity as it applies to college students diagnosed with depression could provide insight for the implementation of similar programs. It is necessary to examine the perceptions of both mentor and participants as to the contributing factors in peer-mentoring relationships and the dynamics of those relationships involving physical activity.
Purpose

The purpose of this study was to identify participant and mentor perceptions of the dynamics and personal competencies demonstrated in a college physical activity program for individuals suffering from depression. For the purpose of this study, relationship dynamics are defined as the active and changing process in which two or more people or groups talk to, behave toward, and deal with each other. Specific research questions addressed included:

1. What are the dynamics of the peer mentoring relationships in this program?
2. What inter-personal skills, as perceived by the mentor and mentee’s experiences, make a peer mentoring relationship successful?

Theory

Social cognitive theory (SCT), originally termed social learning theory, states that learning occurs in social environments with dynamic and reciprocal interactions of person, environment and behavior (Bandura, 1999). Bandura’s work entitled, “Social Cognitive Theory: An Agentic Perspective,” states that this theory is founded on the idea that there is a reciprocal causation between cognitive, affective and biological events, behavioral patterns and environmental events. These five things all interact and influence one another bidirectionally (Bandura, 1999). There is a strong emphasis placed on the social environment as individuals acquire and maintain certain behaviors. Bandura argues that personal agency operates within a network of sociostructural influences and that people are producers as well as products of social systems. New social realities can be created to reshape one’s cultural life. This unique emphasis on social influence and its emphasis on external and internal social reinforcement leads this theory to consider how
individuals acquire and maintain behavior, while also considering the social environment in which individuals perform the behavior (Bandura, 1999). This theory has often been used in health promotion to initiate varying healthier behavior changes among individuals. This theory suggests that there is a causal structure in how self-efficacy collaborates with goals, expectations and perceived environmental impediments in the regulation of human motivation and behavior (Bandura, 2004). The ultimate goal of the theory is to explain how people regulate their behavior, largely based on how they learn by observing others.

Social cognitive theory provides an informative framework for examining peer mentoring. For example, reciprocal determinism is a central concept to the SCT and it refers to the reciprocal interaction of an individual, environment and behavior. This applies directly to the program through the participants’ interaction with the mentors, both the physical and social environment created in the pairing and the behavior of being physically active together. The idea that one’s behavior impacts and is impacted by personal characteristics and the social environment creates the helping culture of positive peer-mentoring relationships. By understanding the idea of observational learning, another key concept of SCT, investigators can better understand the role-modeling impact of peer-mentors in the relationships. This part of the theory suggests that people can reproduce behaviors of others through observation, and if successful, leading to a positive behavior change. Finally, a characteristic of SCT applicable to this study is self-efficacy. This refers to the level of a person's confidence in his or her ability to successfully perform a behavior (Bandura, 1993). In Bandura’s paper on self-efficacy he states that, “A low sense of efficacy to exercise control produces depression as well as anxiety . . .
another route to depression is through a low sense of social efficacy” (p. 134). He continues on to explain that perceived self-efficacy could promote healthier habits. The stronger this perceived self-efficacy, the more successful an individual can be in all phases of adopting health-promoting habits into their regular lifestyle (Bandura, 1993).

It is important that peer-mentoring relationships support a culture of confidence and increasing self-efficacy for both the peer mentor and participants. One of the main goals of any such program is to increase the confidence level of participants to make a positive behavior change. A logical conclusion then, from a SCT perspective, is that mentoring programs need to carefully cater to participants’ social environments, acknowledging the dynamic and reciprocal interactions of person, environment and behavior.

**Overview of the Program**

The program being studied was a peer mentored physical activity program designed to be a treatment component of depression in college students. At the time of this study the program was in its fourth semester at a state university in the western US and had served approximately twelve participants per semester in previous years. It was designed as a program for students, run by students, utilizing physical activity, intrinsic motivation and peer mentoring as a treatment for depression. The frequency of the program was an average of two hours of participation on two separate days, per week for eight weeks. The forms of physical activity engaged in during these sessions were chosen by the participants and facilitated by the mentors.

Once hired, peer mentors, both undergraduate and graduate Kinesiology students, participated in training including three hours of instruction by the program director that served as a physician at the university’s Counseling and Wellness Center. This training
addressed the benefits and risks of exercising, confidentiality, motivational techniques, depression education, adherence strategies, emergency contacts and symptoms and signs of suicidal ideation. One of the specific training programs for mentors was DORA (Depression OutReach Alliance), which is a one-hour peer-based mental health wellness and suicide prevention program. Mentors also met with the program director to review program logistics and discuss peer-mentoring topics including: communication, relationship development, boundaries, and confidentiality. Here they were also taught that they were to be referred to as “exercise buddies” by and to their participants as opposed to peer mentors. Peer mentors contacted student participants after completing all of the training and having been matched up by the program director.

The primary roles of the peer mentors were to: provide information, motivate regular physical activity and serve as a role model for participants. First, mentors provided relevant information to participants regarding the importance of regular physical activity (both in terms of health and psychological state) and the objectives of the program. As a result of training, mentors were knowledgeable of techniques and safety associated with participation in various forms of physical activity. In addition, they were responsible for building a professional and motivating relationship during sessions through health promoting and genuine positive conversations. A previous study, utilizing quantitative methodology, indicated that the program being studied mitigated depression in nine college students and that the mentoring relationship was an integral part of the program (Rieck, 2012).

A typical session would be scheduled in advance based on mentor and participant availability. Collectively, they determined the day, time, location and physical activity.
To confirm the appointment, mentors sent participants a reminder about sessions the day before. An example of a typical session can be drawn from Lindsay (mentor) and Alyssa (participant). After confirming a day, they decided to meet up at a local park to walk their dogs together. At the session, they walked and talked for about an hour. Conversation topics ranged from how Alyssa, the participant, was doing and feeling to different television shows they were watching. After about an hour they wrapped up their session together by scheduling the next time they would meet and potential physical activities they could engage in. After the session, Lindsay sent a follow up message to Alyssa about their time together, emphasizing physical activity and commenting about looking forward to their next sessions together.

Methods

Participants

Participants and mentors attended a comprehensive university, totaling approximately 16,000 students, in the western US. Participants consisted of ten (8 female, 2 male) 18- to 40-year-old undergraduate and graduate students from a various fields of study, diagnosed with depression. Participants must have been previously diagnosed with depression through either the Student Health Center or Counseling Centers and recommended to the program by a physician as part of their treatment for depression. After consent was received, the program coordinator contacted students and students were paired with a peer mentor based on common interests, gender preference and/or availability.

Mentors consisted of five (4 female, 1 male) 22- 27-year-old undergraduate and graduate Kinesiology students (see Table 1). Peer mentors were Kinesiology graduate
Table 1

Participant and Mentor Pairings

<table>
<thead>
<tr>
<th>Participants</th>
<th>Students Status</th>
<th>Mentor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samantha</td>
<td>Undergrad Student</td>
<td>Katie</td>
</tr>
<tr>
<td>Jessica</td>
<td>Undergrad Student</td>
<td></td>
</tr>
<tr>
<td>Heather</td>
<td>Undergrad Student</td>
<td>Lindsay</td>
</tr>
<tr>
<td>Alyssa</td>
<td>Graduate Student</td>
<td></td>
</tr>
<tr>
<td>Caitlin</td>
<td>Undergrad Student</td>
<td>Stacy</td>
</tr>
<tr>
<td>Emily</td>
<td>Undergrad Student</td>
<td></td>
</tr>
<tr>
<td>Will</td>
<td>Undergrad Student</td>
<td>John</td>
</tr>
<tr>
<td>Andrew</td>
<td>Undergrad Student</td>
<td></td>
</tr>
</tbody>
</table>

and undergraduate students who had taken or were in the process of taking an Exercise Behavior and Adherence course and who were also recommended by a faculty member.

All completed an application including a resume, unofficial transcripts and a cover letter with at least two references. Application were reviewed by the program director and interviews for qualified applicants followed.

Mentor Reports

Mentor reports were completed after each meeting with their participant. An online calendar (using Outlook) was created for mentors to keep track of participant meetings and details of each meeting. The prompt provided to the mentors was, “Please provide details of activities participated in and any other significant points of information (i.e., mood change, significant points of conversation, etc.” Mentor reports created an immediate and permanent record of mentor/participant activities and interactions.

Participant Journals

Participants were also encouraged to make an electronic journal submission after each session with their mentor; five out of the eight participants submitted at least one during
their participation in the program. The prompt for these journal submissions read: “What was your experience in the program this week?”

**Interviews**

After the program was completed, the primary researcher interviewed all participants and mentors separately. Interviews were semi-structured, open-ended interviews and approximately 40 minutes in length. Questions focused on successes and barriers, and how these were addressed. Questions were asked about the relationship between participants and their mentor, what their discussion topics were during sessions, and physical activity choices.

**Data Analysis**

Participant and mentor interviews were audio taped and transcribed verbatim. Constant comparison (Goetz & LeCompte, 1984) was used to analyze interview transcripts. This systematic process included several steps to categorize interview responses and accurately determine the contributing factors to and perceptions of the peer mentors and participants. At each phase of data analysis the researcher and an experienced qualitative researcher (second author) serving as a peer debriefer, individually read transcripts and made notations in the margins. The goal of this phase was to scan the data to locate common categories of responses that related to the study’s purpose. Next, the process of conceptualizing, defining, and developing categories of results in terms of their properties and dimensions was conducted. In this phase, we brought our individual analyses together and revisited all the data to examine the mentor relationships, sharing our insights and challenged each other’s interpretations, and made new interpretations where necessary. In the final analysis phase, the goal was to
systematically develop categories to illustrate results. This step included the process of sorting out the relationships between concepts and subconcepts with the ultimate goal being to discover the ways categories related to each other. The most relevant excerpts from each of the categories obtained by coding were integrated to portray participant and mentor perceptions of the mentoring process. Thus, direct quotes were drawn from participants’ interviews and journal submissions.

Trustworthiness was established utilizing two separate techniques. First, triangulation employing multiple investigators and multiple data sources were utilized to confirm the findings (Merriam, 2009). Data were triangulated for analytical purposes across all data sources (interviews, mentor reports, participant journals). Investigator triangulation occurred through the use of multiple investigators analyzing data. Next, a researcher journal was kept to purposefully search for variations in participant perceptions of the mentoring process (Merriam, 2009).

Results

- **Research Question #1:** What are the dynamics of the peer mentoring relationships in this specific program?

  For the purpose of this study, peer-mentoring relationships are described in terms of personal and professional interactions between participants and mentors. Specifically, participant and mentor perceptions and interpretations of their peer-mentoring relationship were explored. Three themes depict the dynamics of the peer-mentoring relationship: (a) personal and professional interactions, (b) communication and openness and (c) role modeling.
**Personal and Professional Interactions.** Interactions proved to be an essential aspect of the mentoring program for both participants and mentors. Personal and professional interactions during physical activity sessions helped to shape the dynamics of their relationship. For example, participants often viewed their relationship with their mentor in terms of friendship. Caitlin, a female participant, described her relationship with her mentor Stacy as, “It’s like someone wants you there and you want them there so it’s like a mutual friends type of thing going on.” Similarly, Andrew explained his relationship with his assigned mentor by stating, “Yeah, we became friends. We have a really good relationship, we get along really well. It seems like we have similar interests.” A participant journal entry written by Andrew also described the mentor relationship in terms of friendship by stating:

I thought this program would be great for me. I have known the benefits of exercise however, I could never find the motivation to do it. I knew making a commitment to someone would encourage me to get out and do my exercise. I was excited to find someone I could bond with through exercise but, also possibly gaining a friend. This I was right about.

Conversely, mentors were also cautious to maintain professional boundaries. According to Katie, a peer-mentor, the relationship, “is part of what actually helps them, it is that social support, but it is a friendship with boundaries,” and a, “positive helping relationship.” Mentors stated that it was important to set boundaries within the relationship early so that it could continue as a helping relationship. These boundaries served to establish appropriate, positive and motivating goals for sessions. Mentors
expressed that a relationship that was too friendly lacked professionalism and diminished the effectiveness of the program.

Mentors explained that they made a conscious effort to maintain professional boundaries, stating that they were cautious to not self-disclose anything that might not be beneficial. Specifically, they indicated that communication needed to remain helpful and not too friendly or, ‘gossipy’. Interactions needed to be congruent with the vision and purpose of the program. John stated that this boundary was tough to remember with one participant because their relationship came easily based on common interests, but he made sure to remain aware of it and even though he often felt the participant was similar to a friend he express that during their time together “everything we did together was related to physical activity.” He explained, “The only time we would hang out was in the program and everything we did together was related to physical activity. The line was always drawn before and after the session.” Another boundary set by mentors was that of confidentiality. John summed it up by stating that, “Relationship wise it was all, kinda like being a confidential friend. I know that Will and Andrew told me a lot of stuff I wouldn’t repeat to anyone.”

**Communication and openness.** An important element associated with the dynamics of the peer mentoring relationship identified by both mentors and participants was communication and openness. To create a successful relationship, participants stated mentors needed to be genuine and open-minded. As directed in their training, mentors avoided over-sharing about themselves by making a conscious effort to adhere to appropriate conversation topics, also noting that having genuine behavior and communication were essential to facilitating a quality and helpful relationship. This was
important to the process because it allowed the participants to feel valued. Caitlin wrote in one of her participant journal entries, “Getting out and moving around and just having someone to talk to has really helped my stress and anxiety. My work out buddy has been really kind and understanding.” This same genuine and openness was displayed by a mentor’s ability to maintain an encouraging, optimistic and nonjudgmental atmosphere-in addition to their ability to remain adaptable and reliable to meeting times. One participant, Jessica, explained that, “they [mentors] should be friendly, optimistic, they should be approachable, they should be talkative . . . and they need to be able make sure that person is comfortable.” It was commonly stated by participants that they viewed their mentors as a, “people person,” and that this was important in making participants feel more comfortable during sessions. Similarly, Samantha, another participant said, “Not only was I able to trust her, it seemed like she was able to trust me and that was huge...her being willing to share things with me makes me feel trusted.” Lastly, participants stated that mentors must have an ability to listen, give encouraging advice and be willing to participate in small amounts of self-disclosure. Mentors determined the level and content of self-disclosure that would be beneficial to the relationship. Alyssa, a participant, stated:

Her [mentor] conveying to me that the things I’m going through are not completely unique . . . that can be empowering because you do feel alone, you do feel a little isolated . . . so just her acknowledging, you know, my life circumstances are understandable . . . just encouraging me along the way.

Similarly, mentors also described open communication as essential to the dynamics of the peer mentor relationship. Katie, one of the peer mentors, expressed that, “open
communication and commitment to each other,” were two of the most important things needed to make a peer mentoring relationship successful. Katie also told how this communication needed to be mutual when she discussed one of her participants who would not talk much and it was a challenge for her to improve that relationship without the effort of her participant.

Commitment was described as frequency of communication with their participants, preparedness and consistency with sessions, and a mutual regard between mentors and participants. This commitment and open communication facilitated growth in the relationships. Stacy identified more open communication with her mentee over time as a sign of progress for her participant and stated that, “I watched her become happier, I guess you would say. Like just in the way she responds to me, the things that she said and the things she decides to tell me.” Upon recognizing the impact of communication, one thing Stacy said she would have done differently with a previous participant was that, “I would have sent random texts like, ‘hey I just wanted to check in, good luck on your test today,’ or just little things like that. Not just a once a week communication.” She expressed that this may have deepened their relationship and facilitated more open communication.

However, in some cases a lack of communication was present, leading to scheduling issues, last minute cancellations or no shows. Participants were notified that with two no shows without letting the mentor know could result in them being dropped from the program. This happened infrequently but two mentors mentioned needing to drop a participant at some point during their time as a mentor. Last minute cancellations were more common than complete no shows and these happened about once or twice a month
with participants. If mentors contact their participants the day before and remind them of
the meeting, there was a higher chance of them not showing up to the session.
Communication during sessions was more challenging as well with different participants
depending on their willingness to open up or level of commonalities between mentor and
participant.

**Role-modeling.** Peer mentors clearly viewed themselves as a role model of a positive
and healthy lifestyle, a responsibility clearly recognized by participants as well. For
example, one participant described her mentor by saying, “she’s strong, you can tell, not
just physical but her character, she is just a strong woman and she is admirable”
(Samantha). Participants aspired to emulate these positive characteristics they observed in
their mentors.

By being a role model, mentors stated that they cared for participants’ well-being and
took personal responsibility for the mentee’s experience in the program. They recognized
the role of their nonverbal communication, demeanor, the example they set and its impact
on the participants’ willingness to progress throughout the program. Mentors motivated
and guided participants to think about a physically active lifestyle and facilitated an
increase in levels of self-efficacy among participants. This was most powerfully achieved
by being an example of healthy living. Peer mentor, Katie, said she thought that her
participant, “looks up to me and I think she kinda followed my example by being active
and social.” Mentors placed a high value on their role and responsibility to set an
example for their participants and recognized the effect it had on participants’ thoughts,
speech and behavior. Lindsay, another mentor, emphasized the importance that the
mentors, “needed to be healthy themselves. I don’t think you could be, or should be, a mentor if you’re not.”

Research Question #2: What skills and/or competencies, as perceived by the mentor and mentee’s experiences, make a positive peer mentoring relationship?

Peer-mentors displayed an organized pattern of behavioral characteristics that were identified as essential to their success in forming relationships as perceived by the mentors and participants. These included the mentor be or have: a) professionalism and knowledge, b) dependable and trustworthy, c) enthusiasm, and d) empathy.

Professionalism and knowledge. Professionalism and knowledge were identified as important attributes by both mentors and participants. For example, Jessica identified a basic knowledge about depression, counseling and exercise as being important, “People come to this program for different reasons, so you need to have some type of background . . . if you see a behavior and have the knowledge you can help them.” Similarly, Alyssa stated, “absolutely education, the different exercises and stretches...her knowing how the body works and how it is made up.” Participants felt more confident knowing that their mentors were knowledgeable about both mental and physical health. Participants held mentors to a standard, expecting that they understood their mental stress and how to utilize and adapt physical activity to meet their needs in an effective way throughout the program.

Similarly, when asked what characteristics or competencies were important for this role mentors stated they needed to be knowledgeable about, “effects of physical activity on depression, or how social support can keep individuals physically active” (Stacy). Mentors recognized that physical activity was one factor playing a role in the success of
the program, providing accurate information and social support were others. Katie (a mentor) stated that mentors must, “definitely have exercise competence, knowing a broad level of activities . . . and they need to know the warning signs and depressions symptoms.” Being knowledgeable was emphasized by mentors when stating that being able to provide accurate and up to date information aided in their ability to be prepared for each sessions as well as to gain the confidence of their participant.

**Dependable and trustworthy.** Participants described that is was important that they could depend on their mentors to be supportive, encouraging, and committed to their experience and potential growth during their participation in the program. When it comes to dependability Heather stated, “Having someone who is definitely going to be there was really motivating to continue doing stuff.” Frequently, participants’ confidence in their mentor played a motivating role both in and out of their immediate time together. Katie, a mentor echoed the importance of being reliable, as one participant told her, “I wouldn't have gotten out of bed if I didn’t have to meet you today.” This is an example of a mutual accountability; not only was the mentor committed to being there for their participant, but the participant was committed to being there for the mentor as well.

Closely associated with dependability was trustworthiness. Trustworthiness was present when a participant felt that their mentor had their best interest in mind. This is seen in a statement by participant, Caitlin:

Just the idea that someone is there, if you need someone, cause she said ‘even if you need to talk about anything, if you just want to spill your guts, I can’t tell anyone’. It was basically like having a therapist and exercising at the same time . . . even knowing they’re your exercise buddy, it’s just nice, knowing someone is there.
Participants trusted their mentors when they recognized the level of effort and willingness that mentors put in to help and build supportive relationships. Further, confidentiality was a key element in the relationships and the confidence participants had in sharing thoughts, experiences, and feelings.

**Enthusiasm.** Mentor enthusiasm enhanced participants’ commitment to the program. Participants discussed lack of motivation and commitment as being a main contributor to their physically inactivity and that having the accountability of meeting someone helped with their motivation and commitment level. Participants recognized commitment and enthusiasm levels of mentors and associated them with a genuine and positive concern. This is exhibited in Samantha’s comment: “It makes you feel wanted, she wants to be there for you and I want to be there for her. I’ve committed to this program and having that genuine enthusiasm has helped me want to commit to other things.”

Support given by mentors helped to build a habit of commitment that assisted in external growth and commitments for participants beyond the program. Participant, Jessica, expressed the positive impacts it had on her when she recognized that for her mentor, “It wasn’t just a job for her, it was more kind of something she was doing for fun.” There was a level of enthusiasm recognized and expressed by both mentors and participants in creating helpful and successful relationships. This enthusiasm encouraged and promoted participant growth to be more positive and commitment minded in and out of the confines of the program.

**Empathy.** Empathy is the ability to share or understand feelings of another person. It is one’s ability to intellectually or vicariously identify with the experiences, thoughts, or attitudes of others. In this study empathy was represented in statements made by both
participants and mentors. For participants, the fact that mentors were also students was an important factor, resulting in an ability to understand the demands and circumstance of their lives. Jessica, explained, “When I found out it was going to be a student, I was like oh its someone who knows the same crap I’m going through, so it was actually really nice.”

Similarly, Alyssa shared what Lindsay, her mentor, did to help her through this process:

. . . her [Lindsay] conveying to me that the things I’m going through are not completely unique . . . that can be empowering because you do feel alone, you do feel a little isolated . . . so just her acknowledging, you know, my life circumstances are understandable . . . just encouraging me along the way.

Later when Alyssa was asked what the best part of the program she shared just how powerful her relationship with her mentor was, “I guess someone validating, gosh that sounds corny, but really somebody validating that I’m not alone and that my life circumstances aren’t such that they can’t be changed, you know, kinda giving me hope really.”

In Lindsay’s interview she said it was important for mentors to convey the message of, “I’ve been there, I know what that’s like and I’m here for you.” A conversation she had with Alyssa stated,

It was that moment that I realized that everybody has their own story and everybody really is going through their own thing and placing judgment on people is not fair and just kind of that connection was almost more of an emotional connect that we had with one another.
Discussion and Conclusions

The purpose of this study was to identify participant and mentor perceptions of the dynamics and personal competencies demonstrated in a college physical activity program for individuals suffering from depression. Findings from this study coincide with Kram and Isabella’s (1985) findings that peer relationships make it easier to achieve higher levels of communication, collaboration and mutual support. Results also indicated that positive mentoring relationships included personal and professional interactions, which support the findings of Kram and Isabella who found that peer mentors were able to discuss career functions as well as areas that extended beyond specific job-related conversation. Participants repeatedly stated that their adherence to the program and attendance to the physical activity sessions were because of their sense of mutual responsibility to their peer mentor. The social support given to participants by their mentors significantly shaped their perceptions of effective relationships. These findings support Boyle, Matern, Lassiter, and Ritzler’s (2011) study of a peer-to-peer physical activity intervention among college students where it was discovered that peer interventions were effective in improving physical activity participation. This study adds to the literature base by emphasizing the boundaries needed to make a peer mentoring relationship successful and beneficial for participants.

Both participants and mentors in the current study identified the dynamics of their relationship, describing interactions, communication, and role modeling. A difference, however, existed when describing the personal and professional boundaries. Participants tended to view the relationship in terms of friendship, while mentors knew it was a positive helping relationship or a friendship with boundaries. Participants most frequently
described their supporters as both mentors and friends, helping to facilitate a relationship. Mutual self-disclosure aided in developing open, nonjudgmental communication between pairings. Some of the primary topics mentors shared about themselves were personal experiences with depression, health topics, and the everyday stresses of being a student—being mindful not to over share and stick to information that would be beneficial to the participant. Participants appreciated the physical activity and dependability of their mentor to be there ready and willing for whatever activities they selected. These results agree with others identifying successful peer mentoring relationships based on knowledge, trustworthiness, communication skills, enthusiasm and empathy (Bouquillon et al., 2005; Dorgo et al., 2009; Kram & Isabella, 1985; Lahey et al., 2005; McLean 2004; Pitney & Ehlers, 2004). Similar to Dorgo et al. (2009), the combination of knowledge of exercise programming, adherence to the program and peer mentoring yielded the most positive results as recorded in their study and reported by mentors and participants in this study.

A key tenet of Bandura’s Social Cognitive Theory (1999), reciprocal determinism, describes the interaction of an individual, environment and behavior. Participants in this study expressed that the relationship with their mentor played a major role in their perceptions of the program as well as its success in meeting their needs mentally and physically. This was because of the environment that was created by the mentors and their ability to develop these encouraging relationships with their participants. Also consistent with social learning theory, observational learning occurred and was expressed specifically through participants’ interview responses. For example, one participant stated that when she realized her mentor was also a student and had some of the same struggles
she was experience, yet still seems so mentally strong and healthy, she (the participant) knew that she could live that lifestyle as well. Some participants gained confidence and grew in their ability to make commitments and begin to lead a healthier lifestyle.

Mentors and participants spoke positively about their experience in this program and each expressed an aspect of personal growth. Results also support Kram and Isabella’s (1985) findings that there is a mutuality component to peer mentoring relationships in that both sides in some degree act as the giver as well as the receiver in functions of the relationship.

Findings have implications for the development and refinement of peer mentoring programs, identifying specific characteristics needed to make peer-mentoring relationship successful. Specifically, results identify the significant impact that peer relationship had on participants. Such information may aid future mentors to refine their ability to form helping relationships by establishing relationship boundaries and looking for ways to be genuine and relatable to the participants. Findings also indicate the importance of peer-pairings and illustrate how this peer relationship facilitated a helping relationship that was beneficial not only to participants, but also to mentors. Stacy told about one participant from a previous semester’s participation in the program, with whom she felt she was poorly matched with and she felt their lack on commonalities impacted their relationship in the program. This study also points out the necessity for boundaries within the peer relationships and the significance this has in creating a positive helping relationship that facilitates growth, increase self-efficacy and in some cases lifestyle changes among participants.
A number of programmatic and methodological implications can also be drawn from this study. First, future researchers should consider a mixed-methods approach. Collecting quantitative measurements of depression symptoms in addition to conducting verbal interviews describing participants experience in the program may strengthen the effectiveness and identification of contributing program factors. Second, researchers should collect feedback from participants on a more frequent and structured basis via more formal debriefing sessions after each physical activity session during which a number of questions could be asked to focus discussion (e.g., What are positives in your life? What is making a difference in this program and outside in other aspects of your life? What is not going will with activity and life? What is this program doing that is helping?). It may also be beneficial from a research perspective to record and analyze these debriefing sessions. Lastly, future researchers should more closely examine the breadth and depth of training received by the mentors prior to being assigned to participants to decide if an expansion of training topics might be beneficial to mentors. Although mentors were educated about the signs and symptoms of depression there was more to the day-to-day operations of the program that need to be addressed. Mentors should be trained in facilitating conversation and cultivating relationships whether or not certain commonalities are there. Additional topics may include particular character traits and behaviors that facilitate positive relationships and strategies to promote a high level of self-efficacy. In order to be a successful mentor they need to be and example of healthy living, personable, genuine and organized with communication.

This study makes several important contributions to the mentoring literature. First, results support the importance that mentors recognize and take responsibility for
exhibiting positive and healthy characteristics to serve as a role model for participants in
the program. The study provides many indicators as to the importance of preparing
mentors with adequate and applicable training for their specific roles. Mentors need to be
trained on depression symptoms and severities. They also need to be knowledgeable
about the human body, exercise and varying forms of physical activity. Future trainings
should also incorporate the importance of particular characteristics as well as some initial
cornerstone starters to building relationships. If a mentor gets paired with an individual
who has less in common with them than they’d like, they should be trained on how to
capitalize on the peer aspect of the relationship to find commonalities to establish a
positive and progressive relationship from the start. Results of this study also highlight
participant and mentor perceptions of the peer relationships and important factors that
contributed to experiences in the program. Experiences in the program for both
participants and mentors were predominately positive and meaningful. The biggest
struggles were scheduling conflicts which also contributes to the challenge of keeping
participants consistent with meet ups. One of the primary questions now becomes, how
can the impact and reach of this type of program be expanded? Can other universities
implement a similar program and get the same results? Further, can institutions other than
universities benefit from an exercise-based program for individuals suffering from
depression? Answers to these questions may result in a more comprehensive
understanding of this program, it’s impact and it’s potential.

References


REFERENCES
REFERENCES


Participant Interview Protocol

Questions:

- What was your experience in the Wellcat Fit Program?
  - What specific things contributed to that experience? Positive and negative?
- Do you feel this program has helped you? If yes, in what way?
- How would you describe your relationship with your peer-mentor?
  - Describe them; what kind of a person are they?
  - What things did they say or do that was helpful in the process? Not helpful?
- What challenges, if any, did you face in the relationship with your mentor while in the program? How were these barriers addressed?
  - What skills and competencies were needed?
- What challenges, if any, did you face with the program in general? How were these barriers addressed? (ie. time, anything identified as common in literature?)
- What types of physical activity choices were made most often? Why or how were these activities chosen?
- Reflecting back, what was the most significant part of this program for you?
- Is there anything else you would like to share about your experience in this program?
APPENDIX B
Peer-mentor Interview Protocol

Questions:

- What is your background, if any, in peer-mentoring?
- Can you describe the training process to becoming a peer-mentor? Your thoughts about the training?
  - What did you find most useful? Least useful?
  - In retrospect, what additional training would have been beneficial in working with you partner?
- What was your experience like as a peer-mentor in the program?
  - What specific things contributed to that experience; positive and negative?
- How many participants did you work with? Describe your relationship with each participant individually.
  - How do/did they differ?
  - What things did they say or do that was helpful in the process? Not helpful?
  - How did your approach differ with each?
- What challenges and barriers did you face in the relationship with each participant? How ere these perceived barriers addressed?
  - Speak to each relationship separately.
- Based on your experience in the program, what skills or competencies are needed to make a peer mentoring relationship successful?
- What types of physical activity choices were made most often? Why or how were these activities chosen?
- Reflecting back, what was the most significant part of this program for you?

What would you change, if anything, about the current program?
APPENDIX C
Peer Mentor Hiring and Training Protocol

Hiring process – Peer mentors were Kinesiology graduate and undergraduate students who had or were in the process of taking KINE 505: Exercise Behavior & Adherence. They were also recommended by a faculty member. All had completed an application, including: resume, unofficial transcripts, a cover letter and at least two references. Applications were reviewed by the program director and interviews for qualified applicants followed.

Training protocol – Once hired the peer mentors underwent training from a variety of sources including:

- Three hours of training at the Student Health Center
  - Training conducted by the program director
  - Training includes: benefits and risks of exercising, confidentiality, motivational techniques, depression education, adherence strategies, emergency contacts and symptoms and signs of suicidal ideation
- DORA (Depression OutReach Alliance)
  - Presented to the mentors by staff from the Counseling Center
  - Peer based mental health wellness and suicide prevention program
- Individual meetings with the program director to discuss:
  - Program logistics
  - Peer-mentoring topics such as: communication, relationship development, and confidentiality
Informed Consent for Participation in Research
California State University Chico

Project Title: Participant and mentor perceptions of a physical activity program for individuals with depression

Researcher(s): Amanda Clifford, M.A. Student, Department of Kinesiology CSU Chico

Phone Numbers: (714) 393-0627

Dear WellCat Fit Participant,

My name is Amanda Clifford and I am a Master’s student at CSU Chico. I am conducting a research project to identify issues, including challenges and experiences, related to peer-mentoring in a physical activity program for individuals suffering from depression. Specifically, your perceptions and experiences with Wellcat Fit will be explored. The information in this form is meant to help you decide whether or not you wish to take part. If you have questions at any time, please feel free to ask.

You are being asked to participate because you have been identified by your provider as a student who could benefit from the addition of regular physical activity to your health program. We are determining the effectiveness of regular physical activity in relation to symptoms of depression and anxiety. The Student Health Service of CSU Chico would like to offer you an opportunity to participate in a peer assisted physical activity program. Such a program would optimally last up to 8 – 10 weeks and include any form of physical activity you would enjoy. You could potentially benefit from this program by improving your physical health, as well as having fewer symptoms of stress, anxiety and/or depression.

If you choose to participate in the program, you will be asked to meet with a student mentor for the purposes of having an “exercise buddy” at the location of your choice for up to 8 - 10 weeks. You will also be asked to write a reflection journal entry each week and e-mail it to the researcher. Journal responses will be confidential and used only by trained researchers. Participation in this program is entirely voluntary and will not affect
your medical care in any way. The information will be used to develop health and wellness programs for the CSU Chico campus.

Your participation will also involve describing (in an interview approximately 60 min. in length) what your experience was in the Wellcat Fit program. There are no known risks and your participation is voluntary. The possible benefits of your participation are a better understanding of experiences, possible challenges and the various impacts of Wellcat Fit.

There are also inherent risks of any physical activity program which include muscle or ligament injuries, fatigue, altered heartbeat, menstrual complaints, gastrointestinal distress, chest pain, and breathing difficulties. If any of these side effects occur, contact your medical provider at the Student Health Center immediately. If it is after hours, you may seek urgent medical care. It is not the intention of this program to cause personal discomfort for someone however, if you find yourself upset at any time, please go or contact the Student Health Center at (530) 898-5241 or the Counseling Center at (530) 898-6345 for health and counseling services. For after office hours, you may also contact the Butte County Crisis Hotline at (530) 891-2810, available 24 hours per day/7 days per week.

Having read the information on this form, you decide to consent to your involvement in this study, please sign and return this consent form. Participation in this program is entirely voluntary. You may choose not to participate in the program at all or you may withdrawal at any time and it will not affect your medical care in any way.

Please contact Dr. Deborah Stewart, Medical Chief of Staff of Chico State Student Health Service at (530) 898-5241 regarding any pertinent questions about this program and your rights.

Thank you for your cooperation!
Deborah Stewart, M.D., Medical Chief of Staff
Student Health Service

Amanda Clifford
M.A. Student Researcher

My signature on this line affirms that I am interested in participating in this program, and learning more about this program. I have had the program explained to me and all my questions have been answered. I understand that my signature below does not mean that I have to participate fully in this program and that I can stop my participation at any time I wish without consequence.

Signature:
Email Address:
Date:
Informed Consent for Participation in Research
California State University Chico

Project Title: Participant and mentor perception of a physical activity program for individuals with depression

Researcher(s): Amanda Clifford, M.A. Student, Department of Kinesiology CSU Chico

Phone Numbers: (714) 393-0627

Dear WellCat Fit Peer-Mentors,

My name is Amanda Clifford and I am a Master’s student at CSU Chico. I am conducting a research project to identify issues, including challenges and experiences, related to peer-mentoring in a physical activity program for individuals suffering from depression. Specifically, your perceptions and experiences with Wellcat Fit will be explored. The information in this form is meant to help you decide whether or not you wish to take part. If you have questions at any time, please feel free to ask.

You are being asked to participate because you have applied and been hired as a Wellcat Fit peer mentor for students identified by their provider as a student who could benefit from the addition of regular physical activity to your health program. We are determining the effectiveness of regular physical activity in relation to symptoms of depression and anxiety. Such a program would optimally last up to 8 – 10 weeks and include any form of physical activity the participants would enjoy.

If you choose to participate in the program, you will be asked to meet with a student participant(s) as their “exercise buddy” at the location of their choice for up to 8 - 10 weeks. You will also be asked to log each session on an Outlook calendar with information about each meeting with your participant. Calendar submissions will be confidential and used only by trained researchers. The information will be used to develop health and wellness programs for the CSU Chico campus.

Your participation will also involve describing (in an interview approximately 60 min. in length) what your experience was in the Wellcat Fit program. There are no known risks
and your participation is voluntary. The possible benefits of your participation are a better understanding of experiences, possible challenges and the various impacts of Wellcat Fit.

There are also inherent risks of any physical activity program which include muscle or ligament injuries, fatigue, altered heartbeat, menstrual complaints, gastrointestinal distress, chest pain, and breathing difficulties. If any of these side effects occur, contact your medical provider at the Student Health Center immediately. If it is after hours, you may seek urgent medical care. It is not the intention of this program to cause personal discomfort for someone however, if you find yourself upset at any time, please go or contact the Student Health Center at (530) 898-5241 or the Counseling Center at (530) 898-6345 for health and counseling services. For after office hours, you may also contact the Butte County Crisis Hotline at (530) 891-2810, available 24 hours per day/7 days per week.

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Student Health Service

Amanda Clifford
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Signature:

Email Address:

Date:
Hello Amanda,

Dr. John Mahoney has approved your Human Subjects Application; you may start your research as of 03/26/2013. You will receive your approval letter within the next couple of weeks.

Project Title: Participant and Mentor Perceptions of a Physical Activity Program for Individuals with Depression.

Project: Beginning Date: 03/26/2013   Ending Date: 09/10/13

Best Regards,
Marsha

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